

**Claims**

What is claimed is:

1-19. (Canceled)

20. (Previously presented) Method for data transmission, in particular on the basis of the Bluetooth standard, in which data packets can be interchanged by radio by using time slots, the method comprising:

- establishing a first communication channel between a master subscriber and a first slave subscriber;

- operating the first communication channel to perform data exchange during a first time slot followed by a first subsequent time slot in which no data exchange occurs;

- establishing a second communication channel between the master subscriber and a second slave subscriber;

- operating the second communication channel to perform data exchange during a second time slot followed by a second subsequent time slot in which no data exchange occurs, operating the second communication channel including synchronizing the second communication channel to the first communication channel;

- wherein synchronizing the second communication channel includes causing data exchange during a specified time slot, the specified time slot determined based upon a time slot in which data exchange occurs in the first communication channel; and

- determining a synchronization parameter for synchronization of the second communication channel, the synchronization parameter defining a phase offset between a first data interchange and a second data interchange, the first data interchange between the master subscriber and the first slave subscriber via the first communication channel and the second data interchange between the master subscriber and the second slave subscriber via the second communication channel.

21. (Previously presented) The method according to claim 20 further comprising operating the first communication channel in one of the group consisting of a sniff mode and a park mode.

22. (Canceled)

23. (Previously presented) The method according to claim 20, characterized in that at least one of the group consisting of the first communication channel and the second communication channel includes an SCO data link, with a time interval of  $T_{SCO}=4$  timeslots or  $T_{SCO}=6$  time slots.

24. (Previously presented) A method according to claim 21, characterized in that at least one of the group consisting of the first communication channel and the second communication channel includes an ACL data link which is operated in at least one of the group consisting of the sniff mode and the park mode.

25. (Canceled)

26. (Currently Amended) The method according to claim 20, wherein first time slot and the second time slot at least partially overlap.

27. (Previously presented) The method according to claim 20, wherein the first time slot in the first communication channel is immediately adjacent in time to the second time slot in the second communication channel.

28. (Previously presented) The method according to claim 20, wherein:  
a period of the first communication channel is an integer multiple of a period of an SCO communication channel operating in a first mode, the period the SCO communication channel being one of the group consisting of four time slots and six time slots.

29. (Previously presented) The method according to claim 20, wherein:  
a period of the second communication channel is an integer multiple of a period of the first communication channel.

30. (Previously presented) The method according to claim 20, further comprising:  
counting the number of zero crossings which have occurred since the setting up of the first communication channel for synchronization purposes and,

setting up the second communication channel using the counted number to determine the phase angle with respect to the first communication channel.

31. (Previously presented) The method according to claim 20 wherein slot-based data interchange takes place between the master subscriber and the first and second slave subscribers.

32. (Previously presented) The method according to claim 20 wherein frame-based data interchange takes place between the master subscriber and the first and second slave subscribers.

33. (Previously presented) The method according to claim 20 wherein synchronizing the second communication channel further comprises:

employing a programmable unit, to synchronize the second communication channel.

34. (Previously presented) A data transmission system which is based on the Bluetooth standard, comprising:

a master subscriber,

first and second slave subscribers operable to communicate data packets with the master subscriber by radio using a time slot method,

a first communication channel providing data interchange between the master subscriber and the first slave subscriber,

a second communication channel providing data interchange between the master subscriber and the second slave subscriber, the second communication channel performing data exchange during a specified time slot, the specified time slot determined based upon a time slot in which data exchange occurs in the first communication channel;

a control device operable to control a setting up of the first and second communication channels as well as a timing of the data interchange between the master subscriber and each of the first and second slave subscribers, the control device being configured to determine synchronization parameters for synchronization of the second communication channel, the synchronization parameters defining a phase offset between a first data interchange and a second data interchange, the first data interchange between the master subscriber and the first slave subscriber via the first communication channel and the second data interchange between the master subscriber and the second slave

subscriber via the second communication channel.

35. (Previously presented) The data transmission system according to claim 34, further comprising a maximum of five additional slave subscribers, and wherein the master subscriber, the first slave subscriber, the second slave subscriber and the additional slave subscribers are simultaneously actively involved in the data interchange.

36. (Previously presented) The data transmission system according to claim 34, wherein the master subscriber and at least one slave subscriber can be operated in an operating mode in which data is interchanged periodically in first time slots and no data is interchanged in adjacent second time slots.

37. (Previously presented) The data transmission system according to one of claim 34, wherein the data transmission system includes a cordless digital communication system.

38. (Canceled)

39. (Previously presented) The data transmission system according to claim 34, wherein the control device comprises a link manager.

40. (Previously presented) The data transmission system according to claim 34, wherein the control device includes a programmable unit.

41. (Previously presented) The method of claim 20, wherein the synchronization parameter defining the phase offset represents a phase offset that is referenced from the first communication channel.